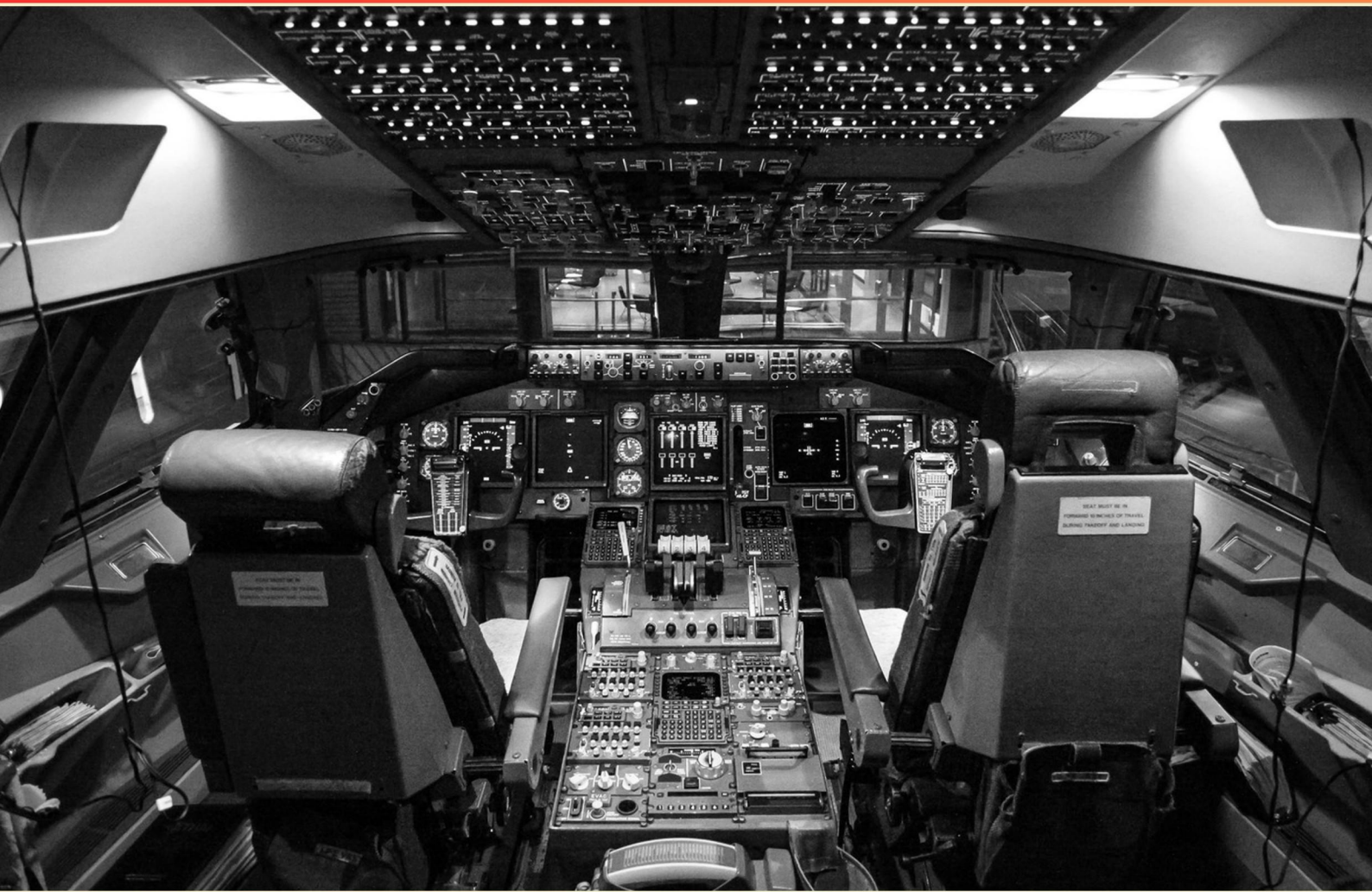


AIRCRAFT SYSTEMS AND FAILURES: GROUND PROXIMITY, NAVIGATION, AND POWER PRACTICE TEST (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

VISIT US ONLINE FOR
THE FULL VERSION STUDY GUIDE

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Introduction

Preparing for a certification exam can feel overwhelming, but with the right tools, it becomes an opportunity to build confidence, sharpen your skills, and move one step closer to your goals. At Examzify, we believe that effective exam preparation isn't just about memorization, it's about understanding the material, identifying knowledge gaps, and building the test-taking strategies that lead to success.

This guide was designed to help you do exactly that.

Whether you're preparing for a licensing exam, professional certification, or entry-level qualification, this book offers structured practice to reinforce key concepts. You'll find a wide range of multiple-choice questions, each followed by clear explanations to help you understand not just the right answer, but why it's correct.

The content in this guide is based on real-world exam objectives and aligned with the types of questions and topics commonly found on official tests. It's ideal for learners who want to:

- Practice answering questions under realistic conditions,
- Improve accuracy and speed,
- Review explanations to strengthen weak areas, and
- Approach the exam with greater confidence.

We recommend using this book not as a stand-alone study tool, but alongside other resources like flashcards, textbooks, or hands-on training. For best results, we recommend working through each question, reflecting on the explanation provided, and revisiting the topics that challenge you most.

Remember: successful test preparation isn't about getting every question right the first time, it's about learning from your mistakes and improving over time. Stay focused, trust the process, and know that every page you turn brings you closer to success.

Let's begin.

How to Use This Guide

This guide is designed to help you study more effectively and approach your exam with confidence. Whether you're reviewing for the first time or doing a final refresh, here's how to get the most out of your Examzify study guide:

1. Start with a Diagnostic Review

Skim through the questions to get a sense of what you know and what you need to focus on. Your goal is to identify knowledge gaps early.

2. Study in Short, Focused Sessions

Break your study time into manageable blocks (e.g. 30 – 45 minutes). Review a handful of questions, reflect on the explanations.

3. Learn from the Explanations

After answering a question, always read the explanation, even if you got it right. It reinforces key points, corrects misunderstandings, and teaches subtle distinctions between similar answers.

4. Track Your Progress

Use bookmarks or notes (if reading digitally) to mark difficult questions. Revisit these regularly and track improvements over time.

5. Simulate the Real Exam

Once you're comfortable, try taking a full set of questions without pausing. Set a timer and simulate test-day conditions to build confidence and time management skills.

6. Repeat and Review

Don't just study once, repetition builds retention. Re-attempt questions after a few days and revisit explanations to reinforce learning. Pair this guide with other Examzify tools like flashcards, and digital practice tests to strengthen your preparation across formats.

There's no single right way to study, but consistent, thoughtful effort always wins. Use this guide flexibly, adapt the tips above to fit your pace and learning style. You've got this!

Questions

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- 1. Which statement best describes the relationship between GPWS and TAWS?**
 - A. GPWS and TAWS are the same system
 - B. GPWS uses radar altimeter to compute height above terrain
 - C. TAWS uses a terrain database and predictive look-ahead to provide terrain awareness beyond GPWS alerts
 - D. TAWS provides only weather avoidance information
- 2. What is the DC ESS network power source if TR 1 has failed?**
 - A. AC ESS BUS and Emer Gen
 - B. AC BUS 1
 - C. Battery Power
 - D. TR 1 Power
- 3. When TR2 has failed, which component provides the DC ESS BUS supply?**
 - A. ESS TR
 - B. ESS BATT
 - C. DC ESS BUS
 - D. TR2 supply
- 4. Under what condition does the GEN 1 fault light come on?**
 - A. When any GEN 1 parameters are not correct and the GEN 1 push button is released
 - B. When GEN 1 parameters are within limits
 - C. When any GEN 1 parameters are not correct and push button pressed
 - D. When Master Warning Lights illuminate
- 5. Which acronym stands for Fault Isolation and Detection System?**
 - A. FIDS
 - B. FADS
 - C. FIDSU
 - D. FIDSS

- 6. Which statement best describes the capabilities of AFS?**
- A. It updates the navigation database
 - B. It provides weather radar control
 - C. Flight Guidance, Flight Management
 - D. It handles radio communications
- 7. If the 1FD2 indication is observed, which description is correct?**
- A. It indicates FD1 on the Captain side and FD2 on the FO side.
 - B. It indicates FD1 on the FO side and FD2 on the Captain side.
 - C. Both indicators are inactive.
 - D. Only FD2 is active.
- 8. What input does GPWS rely on to determine height above terrain?**
- A. GPS altitude.
 - B. Barometric altitude.
 - C. Radar altimeter data.
 - D. Indicated airspeed.
- 9. In the case of a lower DU failure, what happens?**
- A. Automatic reconfiguration occurs.
 - B. No automatic reconfiguration is possible.
 - C. The system switches to an alternate DU automatically.
 - D. A fault is reported but system remains unchanged.
- 10. What are the primary electrical power sources on a modern airliner, including emergency provisions?**
- A. Only engine-driven generators, APU generator, and battery with no RAT.
 - B. RAT in emergencies is the primary power source.
 - C. Battery power alone.
 - D. Engines-driven generators, APU generator, battery as a reserve, and RAT in emergencies.

Answers

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1. C
2. A
3. A
4. A
5. A
6. C
7. A
8. C
9. B
10. D

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Explanations

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1. Which statement best describes the relationship between GPWS and TAWS?

- A. GPWS and TAWS are the same system
- B. GPWS uses radar altimeter to compute height above terrain
- C. TAWS uses a terrain database and predictive look-ahead to provide terrain awareness beyond GPWS alerts**
- D. TAWS provides only weather avoidance information

The main idea here is how terrain awareness advances from a reactive system to an anticipatory one. GPWS uses data from the radar altimeter to measure height above terrain and triggers alerts when you get too close or descend too rapidly. It doesn't anticipate terrain ahead of you; it reacts to your current situation. TAWS, on the other hand, enhances that concept by adding a terrain database (a digital elevation model) and predictive look-ahead using your flight path and nav data. This lets the system warn you about rising terrain ahead of your current position and display terrain information, giving you awareness before you actually reach the terrain. So the best description is that TAWS uses a terrain database and predictive look-ahead to provide terrain awareness beyond the GPWS alerts. The other statements miss this forward-looking, database-driven capability or mischaracterize TAWS as the same system or as weather-only.

2. What is the DC ESS network power source if TR 1 has failed?

- A. AC ESS BUS and Emer Gen**
- B. AC BUS 1
- C. Battery Power
- D. TR 1 Power

The DC essential network relies on sources fed from the aircraft's AC power when available, so that critical DC loads keep power even if one transformer-rectifier unit isn't supplying. If TR 1 fails, the DC ESS bus can still be powered by power from the AC essential bus and the emergency generator. The AC essential bus continues to provide a path for AC power to that network, and the emergency generator can back it up to sustain essential systems. Battery power exists as a limited, backup option for momentary loss, but it isn't the primary source for the DC essential network in this failure scenario. TR 1's power path is unavailable because TR 1 has failed, so the remaining sources that can feed the DC essential network are the AC essential bus and the emergency generator.

3. When TR2 has failed, which component provides the DC ESS BUS supply?

- A. ESS TR**
- B. ESS BATT
- C. DC ESS BUS
- D. TR2 supply

The DC essential bus is kept powered by the essential transformer-rectifier units. If TR2 fails, the remaining ESS TR continues to supply the DC essential bus by rectifying AC power from the essential AC sources and feeding DC to the bus. The battery could back up the system only if both transformer-rectifiers lost AC power, but under TR2 failure the primary supply comes from the remaining ESS TR, not from the TR2 output. The DC ESS BUS is not normally powered by the TR2 supply when that unit has failed.

4. Under what condition does the GEN 1 fault light come on?

- A. When any GEN 1 parameters are not correct and the GEN 1 push button is released
- B. When GEN 1 parameters are within limits
- C. When any GEN 1 parameters are not correct and push button pressed
- D. When Master Warning Lights illuminate

The GEN 1 fault light signals an abnormal generator condition only when the generator parameters are out of limits and the GEN 1 push button is released. The push button acts as a reset for the fault indication; releasing it latches the fault so the light comes on if the parameters remain out of spec. If the parameters are within limits, the light won't come on. Pressing the reset button is used to acknowledge or reset faults, but it's not the condition that triggers the light by itself. Master Warning lights are a broader cue and aren't specific to GEN 1 faults.

5. Which acronym stands for Fault Isolation and Detection System?

- A. FIDS
- B. FADS
- C. FIDSU
- D. FIDSS

Fault isolation and detection systems are designed to identify that a fault exists and then pinpoint which component or subsystem is at fault, so maintenance can address the exact problem quickly. This capability is essential in aviation to keep systems reliable and safe, often integrating with onboard health monitoring and diagnostic logic to provide clear fault reports. The acronym that precisely matches "Fault Isolation and Detection System" is the one that forms FIDS. The other options don't align with the exact wording for this concept, as they would imply different functions or use nonstandard abbreviations in aviation practice.

6. Which statement best describes the capabilities of AFS?

- A. It updates the navigation database
- B. It provides weather radar control
- C. Flight Guidance, Flight Management
- D. It handles radio communications

AFS is the system that automatically flies the airplane along the planned route. It combines Flight Guidance and Flight Management. Flight Guidance is the autopilot/flight director part that translates the flight plan into control commands for the aircraft, managing lateral and vertical paths, altitude, speed, and heading. Flight Management handles the planning side—storing the route, computing waypoints, optimizing the path and performance, and coordinating with navigation data to follow the plan. AFS does not update the navigation database (that's a separate data-management task), nor does it control weather radar or radio communications. Those functions belong to other subsystems. So the best description is that AFS provides Flight Guidance and Flight Management.

7. If the 1FD2 indication is observed, which description is correct?

- A. It indicates FD1 on the Captain side and FD2 on the FO side.**
- B. It indicates FD1 on the FO side and FD2 on the Captain side.
- C. Both indicators are inactive.
- D. Only FD2 is active.

The key idea here is that there are two independent flight director channels, one for each pilot, and these can operate on different channels. Seeing the indication 1FD2 means the left-side (Captain's) flight director is on channel 1 and the right-side (First Officer's) flight director is on channel 2. It tells you which channel each side is following, so the Captain is guided by FD1 and the FO by FD2. This setup is useful when the two channels are not mirrored, providing redundancy and cross-checking between pilots. It's not indicating the FO following FD1 or the Captain following FD2, which would be the opposite configuration. It also isn't signaling that both indicators are inactive or that only FD2 is active on both sides. The explicit pairing of FD1 on the Captain's side and FD2 on the FO's side is what 1FD2 conveys.

8. What input does GPWS rely on to determine height above terrain?

- A. GPS altitude.
- B. Barometric altitude.
- C. Radar altimeter data.**
- D. Indicated airspeed.

The input GPWS uses to determine height above terrain is the radar altimeter data. This instrument measures the actual vertical distance from the aircraft to the ground directly beneath it, giving real-time height above terrain (often called height above ground level). That ground-level measurement is what GPWS uses to assess clearance and trigger terrain alerts, because it reflects how close the airplane is to obstacles or terrain ahead and below, regardless of the airplane's altitude above sea level or barometric pressure conditions. GPS altitude and barometric altitude provide height above mean sea level, not the immediate distance to terrain, and indicated airspeed offers speed information rather than height. Since the goal is to know how far the aircraft is from the ground right under the fuselage, radar altimeter data is the appropriate input.

9. In the case of a lower DU failure, what happens?

- A. Automatic reconfiguration occurs.
- B. No automatic reconfiguration is possible.**
- C. The system switches to an alternate DU automatically.
- D. A fault is reported but system remains unchanged.

The concept being tested is how redundant display units behave when one unit fails. In this setup, a lower display unit failure does not trigger an automatic reconfiguration or switchover to another display. The system does not have an automatic path to re-route the workload to the remaining display, so there's no automatic reconfiguration. The remaining (upper) display can continue to show data, but you'll have a degraded situation with a fault indication for the failed lower unit. Automatic switching to an alternate DU isn't provided by the design, so the correct description is that no automatic reconfiguration is possible.

10. What are the primary electrical power sources on a modern airliner, including emergency provisions?

- A. Only engine-driven generators, APU generator, and battery with no RAT.
- B. RAT in emergencies is the primary power source.
- C. Battery power alone.

D. Engines-driven generators, APU generator, battery as a reserve, and RAT in emergencies.

Redundancy and multiple power sources ensure essential systems stay powered in all phases of flight. In normal operation, the airplane relies on engine-driven generators on each engine and an APU generator to supply the bulk of electrical power for avionics, lighting, hydraulics control, and systems loads. The battery provides a crucial reserve role: it powers starting, powers essential systems during brief abnormal conditions, and acts as a backup when other sources are momentarily unavailable. In an electrical power loss scenario, a ram air turbine is deployed to deliver emergency electrical power to the essential buses. This RAT is not used during normal operation; it activates only in emergencies to keep critical systems alive long enough to land safely. The battery supports short-term needs and engine/APU start, but the RAT provides the necessary emergency power when the primary engine-driven generators and APU generator are unavailable. So the comprehensive description of the primary electrical power sources, including emergency provisions, is engines-driven generators, the APU generator, with the battery as a reserve and the RAT available for emergency power.

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Next Steps

Congratulations on reaching the final section of this guide. You've taken a meaningful step toward passing your certification exam and advancing your career.

As you continue preparing, remember that consistent practice, review, and self-reflection are key to success. Make time to revisit difficult topics, simulate exam conditions, and track your progress along the way.

If you need help, have suggestions, or want to share feedback, we'd love to hear from you. Reach out to our team at hello@examzify.com.

Or visit your dedicated course page for more study tools and resources:

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We wish you the very best on your exam journey. You've got this!

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